

CLAIMS

1. A Composite PTC device having a plurality of PTC devices, each having a laminar PTC element comprising a polymeric PTC material and a pair of electrodes mutually separated and deployed on one side of the PTC element, wherein

the electrodes comprising one electrode from each pair of the electrodes on the PTC devices are integrally and electrically connected and are also connected to one terminal, while the electrodes comprising the other electrode from each pair of the electrodes on the PTC devices are integrally and electrically connected and are also connected to other terminal.

2. The composite PTC device according to Claim 1 having two PTC devices, each having the laminar PTC element comprising the polymeric PTC material and the pair of the electrodes mutually separated and deployed on one side of the PTC element, characterized in that

the pair of the electrodes on one of the PTC devices are facing the pair of the electrodes on the other PTC device,

each of the terminals is deployed between these electrodes, and

the facing electrodes and the terminals between them

are connected electrically.

3. The composite PTC device according to Claim 1 or 2, wherein the laminar PTC element has a cavity section penetrating through in a thickness direction of the PTC element.

4 The composite PTC device according to Claim 3, wherein an end surface of the cavity section is positioned within a peripheral region of the electrode.

5 10 5. The composite PTC device any one of Claims 1 to 4, which can withstand use under DC 240V or higher and can be used as an automotive safety protection device.

6 The composite PTC device according to Claim 5, which can withstand use at DC 600V.

7. The composite PTC device d according to any one of Claims 1 to 6, wherein current of up to 500 mA flows at DC 12V or 24V under a normal use state.

8. The composite PTC device according to any one of Claims 1 to 7, wherein current flows through each laminar PTC element when entering the composite PTC device from the outside via one terminal and exiting therefrom via the other terminal.